

REMARKS

Applicants respectfully request favorable reconsideration of this application, as amended.

The specification was objected to as containing an informality in Paragraph 0028 (as-filed), and has been amended accordingly.

Claims 1, 16, 21, 22 and 27 were objected to as containing pronouns, and have been amended accordingly. Claim 9 has been amended to correct a typographic error. No new matter has been added.

Claims 1–9, 16, 17, 19–22, 24–28, 31 and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hoshino (U.S. 6,301,047). Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hoshino, Claims 10–14, 29 and 30 were rejected as being unpatentable over Hoshino in view of Hara (U.S. 5,815,598) and Claims 15 and 23 were rejected as being unpatentable over Hoshino in view of Kurokawa (U.S. 6,729,541).

In the interests of securing an expedited Notice of Allowance, Claims 1 and 19 have been amended to recite certain features of the claimed invention more perspicuously. Specifically, Claim 1 has been amended to recite, *inter alia*, determining a differential image from the first and second image by subtracting an intensity value of a partial area of the first image from a respective intensity value of a corresponding partial area of the second image. Claim 19 has been amended to recite similar subject matter. Support for these amendments may be found, for example, in the Specification at Paragraph 0017 (Page 6).¹ No new matter has been added, and Applicants respectfully submit that none of the cited references, taken either singly or in combination, teaches or suggests these features.

Hoshino discloses a system for optically identifying an object that has a hologram (or diffraction grating) whose reflective layer is made from a high polymer cholesteric liquid crystal material. See, e.g., Abstract; Col. 2:38–53, etc. FIG. 11 depicts two identification devices 20, 21 that detect right-handed polarized light and left-handed polarized light, respectively. Identification device 20 includes light source 20a, circularly polarizing light filter 24 and light receiving units 22a, b, while identification device 21 includes light source 21a, circularly polarizing filter 25 and light receiving units 23a, b. See, e.g., Col. 8:14 to Col. 9:4, etc.

¹ See, also, Paragraphs 0008 (Page 3), 0011 (Page 4), 0014 (Page 5), 0031–33 (Pages 10–11), etc.

While Hoshino determines the authenticity of his object by measuring, and comparing, polarized light reflected from hologram 1, Hoshino fails to disclose determining a differential image from first and second images by subtracting an intensity value of a partial area of the first image from a respective intensity value of a corresponding partial area of the second image, as recited by Claims 1 and 19. Instead, Hoshino measures the intensity of the light reflected from the entire image of hologram 1, and then, according to his most relevant embodiment, compares the measured intensity from light receiving unit 22a (intensity A) and light receiving unit 23a (intensity C) according to the following relation: $(A-C) / (A+C)$. If this relation is approximately equal to 1, then Hoshino decides that hologram 1 must have the high polymer cholesteric liquid crystal material. *See*, Col. 8:59–61. In other words, Hoshino fails to suggest that a differential image may be determined from the intensity values of corresponding partial areas of the two images. Consequently, Hoshino fails to disclose all of the features recited by Claims 1 and 19.

Moreover, Applicants submit that the remaining references fail to cure Hoshino's deficiencies. Hara discloses JTC system 1 that measures the correlation of a target image T, such as a fingerprint, to a reference image R using Joint Transform Correlation (JTC) processing. *See*, e.g., Abstract; FIG. 1; Col. 6:10, etc. Kurokawa discloses an optical information reading apparatus that measures the optical power produced by one or more layers of a multi-layer hologram recording data storage medium. *See*, e.g., Abstract; FIGS. 1,2; Col. 9:60 to Col. 10:35. Neither reference teaches or suggests that a differential image may be determined from the intensity values of corresponding partial areas of the two images, as recited by Claims 1 and 19.

Accordingly, Claims 1 and 19 are allowable over the cited references. Claims 2–18, depending from Claim 1, and Claims 20–32, depending from Claim 19, are also allowable, at least for the reasons discussed above.

In view of the remarks presented herein, Applicants respectfully submit that this application is in condition for allowance and should now be passed to issue.


A Notice of Allowance is respectfully solicited.

If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

The Commissioner is hereby authorized to charge any fees and to credit any overpayments that may be required by this paper under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 02-2135.

Respectfully submitted,

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